



TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY MINOR PERMIT REVISION NO. 58727
TO OPERATING PERMIT NO. 73803

I. INTRODUCTION

This synthetic minor Class II renewal Permit is issued to Forest Energy Corporation for the continued operation of a wood fuel pellet, animal bedding, and densified wood fire log manufacturing facility. The facility is located at 1001 North 40th Street in Show Low, Arizona in Navajo County. Permit #73803 renews and supersedes Permit #58727.

A. Company Information

Facility Name: Forest Energy Corporation

Facility Location: 1001 North 40th Street, Show Low, AZ 85901

Mailing Address: P.O. Box 2468, Show Low, AZ 85901

B. Attainment Classification (Source: 40 CFR §81.303)

Forest Energy Corporation's Show Low facility is located in an area which is in attainment or unclassified for all criteria pollutants.

II. PROCESS DESCRIPTION

Operations at the facility consist of: (a) wood grinding; (b) sawdust drying; (c) pellet and log production; and (d) pellet screening and packaging. During the wood grinding operation, raw material comprised of mostly pine but also some fir and hardwood that is received in the form of logs, bark, chips, sawdust, and shavings is reduced to chips on-site (for logs) with wet material being fed into the wet hammermill for size reduction. During the sawdust drying operation, material from the wet hammermill is fed into the sawdust dryer to reduce the material's moisture content. The sawdust dryer burner used to heat the sawdust dryer is supplied with wood fines from another part of the process as the primary fuel and with diesel fuel, which is used for approximately 30 minutes during cold start-ups. During the pellet and log production operation, the dry hammermill reduces oversized material to less than 1/4" in size, reduced material is conditioned with water as necessary to prepare for milling, and conditioned material is fed to the three pellet mills or to the log mill to form the desired product. Pellets from the pellet mills are screened and sent to a pellet cooler where ambient air is pulled through the pellets while logs from the log mill travel down a trough for air cooling. During the pellet screening and packaging operation, pellets are either screened or sent to the pellet crumbler to generate animal bedding. Screened pellets are packaged and palletized for shipment or are occasionally loaded into bulk trucks or other containers for distribution. Cooled logs are packaged and palletized for shipment.

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III. LEARNING SITES POLICY

In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department conducted an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools in the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

This renewal permit will not result in any increase in emissions as there are no changes to any equipment or operating conditions. Hence the facility is exempt from the learning sites evaluations.

IV. MINOR NSR

This renewal permit does not result in any changes to existing equipment or operating conditions. Consequently, this renewal permit will not result in any increase in emissions as seen in Table 1 below. As a result, this renewal permit does not trigger minor NSR.

V. COMPLIANCE HISTORY

During the prior permit term the facility was inspected four times. One air quality case was recommended for violating condition II.D.1.d which states the opacity of any plume or effluent from any source shall not be greater than 20%. A Notice of Opportunity to Correct (NOC) was issued to Forest Energy Corporation on August 31, 2017. The deficiency was corrected on-site at the time of the inspection.

VI. EMISSIONS

Table 1: Facility Wide Potential-To-Emit

Pollutant	Tons per Year
PM ₁₀	58.19
PM _{2.5}	58.19
NO _x	39.37
SO ₂	0.20
VOC	31.78
CO	28.59
HAPs	2.74
GHG (as CO ₂ e)	49,042.80

VII. APPLICABLE REGULATIONS

Table 2 below displays the applicable regulations identified, including the verification as to why that standard applies.

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Table 2: Applicable Regulations

Unit	Control Device	Rule	Verification
Pellet and Log Manufacturing Operations (all equipment listed in Attachment "C")	Various cyclones; Enclosure	A.A.C. R18-2-702.B A.A.C. R18-2-702.C A.A.C. R18-2-730.A A.A.C. R18-2-730.B A.A.C. R18-2-730.D A.A.C. R18-2-730.F A.A.C. R18-2-730.G	These rules are applicable to unclassified sources not otherwise subject to standards of performance under Articles 7, 9, or 11 of A.A.C. Title 18, Chapter 2. Products of combustion from the Sawdust Dryer come in direct contact with process materials. Thus A.A.C. R18-2-724 does not apply for fossil-fuel fired equipment.
		A.A.C. R18-2-702	These rules are general provisions for all existing, stationary, point sources not otherwise subject to opacity standards relating to specific types of sources covered elsewhere in Chapter 2 of A.A.C. Title 18.
Fugitive Dust Sources	Water or an equivalent control	A.A.C. R18-2-604.A A.A.C. R18-2-604.B A.A.C. R18-2-605 A.A.C. R18-2-606 A.A.C. R18-2-607 A.A.C. R18-2-614	These rules are applicable to existing and new nonpoint sources of emissions not otherwise subject to regulation under Articles 7 or 9 of A.A.C. Title 18, Chapter 2.

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Unit	Control Device	Rule	Verification
		A.A.C. R18-2-702	These rules are general provisions for all existing, stationary, point sources not otherwise subject to opacity standards relating to specific types of sources covered elsewhere in Chapter 2 of A.A.C. Title 18.
Sandblasting and Other Abrasive Blasting Operations (if applicable)	Wet blasting; Enclosures with dust collecting equipment; Other approved methods	A.A.C. R18-2-726	This rule is applicable to any abrasive blasting operation.
		A.A.C. R18-2-702	These rules are general provisions for all existing, stationary, point sources not otherwise subject to opacity standards relating to specific types of sources covered elsewhere in Chapter 2 of A.A.C. Title 18.
Spray Painting (if applicable)	Enclosures with controls containing no less than 96% of overspray	A.A.C. R18-2-727	This rule is applicable to any spray painting operation.
		A.A.C. R18-2-702	These rules are general provisions for all existing, stationary, point sources not otherwise subject to opacity standards relating to specific types of sources covered elsewhere in Chapter 2 of A.A.C. Title 18.
Demolition/Renovation Operations (if applicable)	N/A	A.A.C. R18-2-1101.A.8	This rule is applicable to any asbestos related demolition or renovation operations.

VIII. PREVIOUS PERMIT AND CONDITIONS

Previous permit Conditions

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The comparison of the substantive conditions in permit #58727 with the conditions in this renewal permit and cross-references the previous permit conditions to their location in the renewal permit is represented in Table 3.

Table 3: Permit #58727 Conditions

Section No.	Determination			Comments
	Revised	Keep	Delete	
Att. A	X			General Provisions – Revised to represent the most recent template language
Att. A.VII	X			Revised to reflect annual reporting requirements for compliance certification.
Att. B.I	X			Facility-Wide Requirements. Revised to represent the most recent template language
Att. B.II.A		X		Condition B.II.A from attachment A shall be retained.
Att. B.II.B		X		Condition B.II.B from attachment B shall be retained.
Att. B.II.C		X		Condition B.II.C from attachment B shall be retained.
Att. B.II.D	X			Revised testing requirements. A performance test conducted on the first year of the permit term. Performance tests over 70% of emission limit require subsequent performance tests annually.
Att. B.III	X			Fugitive Dust Requirements - Revised to represent most recent template language.
Att. B.IV			X	Mobile Sources removed.
Att. B.V	X			Changed to Condition IV. Other Periodic Activities - Revised to represent most recent template language.
Att. C	X			Equipment List - Revised to reflect the process and control equipment that requires a permit as listed by the facility in the current permit application for new Permit #73803

IX. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

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A. Facility Wide

1. Along with the annual compliance certification, the permittee is required to submit reports of all recordkeeping, monitoring and maintenance required by the permit.
2. The permittee is required to maintain, on-site, records of the manufacturer's specifications or an Operation and Maintenance Plan for all equipment listed in the permit.

B. Pellet and Log Manufacturing Operations

1. The Permittee is required to show compliance with the opacity standard by having a Method 9 certified observer perform a monthly visual survey of visible emissions from each stack, cyclone, or other emission point associated with the equipment identified in Attachment "C". The observer is required to conduct a 6-minute Method 9 observation if the results of the initial visual survey appear on an instantaneous basis to exceed the applicable standard. The Permittee is required to keep records of all surveys and observations and as required, take corrective actions and report excess emissions.

C. Fugitive Dust

1. The permittee is required to keep record of the dates and types of dust control measures employed.
2. The permittee is required to show compliance with the opacity standards by having a Method 9 certified observer perform a monthly survey of visible emission from fugitive dust sources. The observer is required to conduct a 6-minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard.
3. The permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.
4. The permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

D. Periodic Activities

1. The permittee is required to record the date, duration and pollution control measures of any abrasive blasting project.
2. The permittee is required to record the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.

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3. The permittee is required to maintain records of all asbestos related demolition or renovation projects. The required records include the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents.

X. TESTING REQUIREMENTS

Pellet and Log Manufacturing Operations

1. The Permittee shall conduct a performance test using EPA testing methods on the Sawdust Dryer Burner during the first year of the permit term to show compliance with the emission limits.
2. If the result of the performance test is less than or equal to 70% of the emission limit, no further testing is required for the remainder of the permit term.
3. If the result of the performance test required is greater than 70% of the emission limit, the Permittee shall conduct another performance test for that pollution control device between 11 and 13 months from the previous performance test.

XI. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
NO _x	Nitrogen Oxides
PM	Particulate Matter
PM ₁₀	Particulate Matter Nominally less than 10 Micrometers
PTE	Potential to Emit
SO _x	Sulfur Oxides
VOC	Volatile Organic Compound